

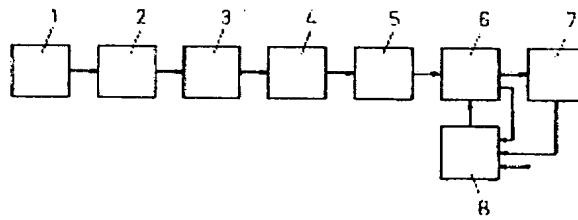
## Automatic analysis and classification of Hep-2 cell patterns

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### Abstract of DE19801400

Automatic analysis and classification of Hep-2 patterns comprises taking a two-dimensional image to be digitized and segmented for classification by colors or gray values and identified for characteristics. For the automatic analysis of cell patterns, a two-dimensional fluorescence optical image of the cell section is taken automatically and digitized by a camera with a computer, or connected to a computer. The digitized image is separated into segments in the background and in the image of the cut cells, and the image of each cut cell is sorted into discrete classification images according to the color. The classified images are gathered according to their dominating image points into separate objects in an isolation process. The characteristics are determined of the classified and selected objects by comparison with characteristic data stored in the computer memory as classification characteristics. The cell patterns and the cell pattern classifications are displayed and/or stored in memory. An independent claim is included for an apparatus for the above process comprising a camera (1) to take a two-dimensional image working with a computer to give a true-color or gray value digitized image. The computer has a stage (3) to identify the cells and segment the image. A stage (4) classifies the image of the separate cells into discrete classifications according to the colors or gray values. The dominant image points of the classifications are gathered into separate objects where a stage (5) determines the characteristic as cell patterns. A comparative stage (6) compares the cell patterns with stored cell pattern data, to be



displayed (7) and/or stored.

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